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Quality Engineering Test Report

SERIES: PS-25 25W AC-DC SIGLE OUTPUT SWITCHING POWER SUPPLY OPEN FRAME TYPE

SAMPLE:	**A.PS-25-3.3**	**3.3V / 5A**	**D.PS-25-12**	**12V /2.1A**	**G.PS-25-24**	**24V /1A**
	B.PS-25-5	**5V /5A**	**E.PS-25-13.5**	**13.5V /1.9A**	**H.PS-25-27**	**27V /0.9A**
	C.PS-25-7.5	**7.5V /3.3A**	**F.PS-25-15**	**15V /1.7A**	**I.PS-25-48**	**48V /0.5A**

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
1	AC INPUT VOLTAGE RANGE	I/P:TESTING SPEC:85~264VAC O/P:FULL LOAD	A:74VAC~267VAC	P
2	LINE REGULATION	I/P:85~264VAC SPEC: A: ±0.5% O/P:FULL LOAD B: ±0.5% C: ±0.5% D: ±0.3% E: ±0.3% F: ±0.3% G: ±0.2% H: ±0.2% I : ±0.2%	A: 0 % ~ 0.183% B: 0 % ~ 0.1% C: 0% ~ 0% D: 0 % ~ 0.05% E: -0.04% ~ 0 % F: 0 % ~ 0 % G: -0.03% ~ 0 % H: 0% ~ 0 % I: -0.03% ~ 0.01%	P
3	LOAD REGULATION	I/P:230VAC SPEC: A: ±2.5% O/P: B: ±2% MIN. TO FULL LOAD C: ±2% D: ±1% E: ±1% F: ±1% G: ±0.5% H: ±0.5% I : ±0.5%	A: -0..36% ~ 0.54% B: -0.24% ~ 0.12% C: -0.158% ~ 0.238% D: 0 % ~ 0.05% E: -0.04 % ~ 0.08% F: 0 % ~ 0.04% G: -0.03% ~ 0 % H: -0.022% ~ 0.022% I: -0 % ~ 0.01%	P
4	OUTPUT VOLTAGE TOLERANCE	I/P:85~264VAC SPEC: A: ±3% O/P: B: ±2% MIN. TO FULL LOAD C: ±2% D: ±2% E: ±2% E: ±2% E: ±2% E: ±2% E: ±2%	A: -0.96% ~ 0% B: -0.25% ~ 0.12% C: -0.4% ~ 0.09% D: -0.05% ~ 0.06% E: -0.06% ~ +0.10% F: -0.04% ~ 0.04% G: -0.06% ~ 0.08% H: -0.069% ~ 0.25% I : -0.04% ~ 0.1%	P
5	RIPPLE & NOISE	I/P:230VAC SPEC: A:80mV O/P: FULL LOAD B:80mV C:80mV D:100mV E:100mV F:100mV G:240mV H:240mV I:350mV	A: 11mV B: 12mV C: 7mV D: 11mV E: 10mV F: 11mV G: 14mV H: 8mV I: 65mV	P

6	AC INPUT CURRENT	I/P:230VAC O/P:FULL LOAD	SPEC: 0.4A	A:0.222A	P
7	MAX. INRUSH CURRENT	I/P:230VAC O/P:FULL LOAD	SPEC: 40A	A:31.781A	P
8	O/P VOLTAGE ADJ.RANGE	I/P:230VAC O/P:MIN. LOAD	SPEC:FIXED	A:3.325V B:5.08V C:7.593V D:12.06V E:13.512V F:14.96V G:24.03V H:27.237V I:47.98V	P

NEXT

NO	TEST ITEM	TEST CONDITION / SPECIFICATION	RESULT	VERDICT
9	SET UP TIME	I/P:230VAC SPEC:200ms O/P:FULL LOAD	A:94.38mS	P
10	HOLD UP TIME	I/P:230VAC SPEC:80mS O/P:FULL LOAD	A:202.969mS	P
11	EFFICIENCY	I/P:230VAC SPEC: A: 66% O/P: FULL LOAD B: 74% C: 76% D: 78% E: 78% F: 78% G: 79% H: 79% I : 79%	A: 68.59% B: 75.87% C: 78.51% D: 79.70% E: 79.1% F: 81.19% G: 83.11% H: 80.2% I : 80.58%	P
12	OVER LOAD PROTECTION	I/P:230VAC SPEC: ABOVE 105% O/P: TESTING FOLDBACK CURRENT SHUTDOWN AUTO RECOVERY	A: 205% B: 180% C: 187% D: 209% E: 211% F: 187% G: 325% H: 322% I : 320%	P
13	OVER VOLTAGE PROTECTION	I/P:230VAC SPEC:115~135% O/P:TESTING	A: 127.3% B: 124% C: 118.6% D: 118% E: 128% F: 116% G: 119% H: 135% I: 119%	P
14	OVER TEMPERATURE PROTECTION & FAN ON/OFF TEST	I/P:230VAC SPEC: O/P:FULL LOAD U1 Tj 135°C TYPICAL	B:OTP:121°C	P
15	GROUND LEAKAGE CURRENT	I/P:240VAC SPEC: L-FG--<0.5mA N-FG--<0.5mA	A: L-FG:0.25 mA N-FG:0.24mA	P
16	INSULATION RESISTANCE	SPEC: I/P-O/P 500VDC/100M Ohms MIN. I/P-FG 500VDC/100M Ohms MIN.	A: O/P-FG >100M Ohms I/P-O/P >100M Ohms	P
17	DIELECTRIC / WITHSTAND VOLTAGE	SPEC: I/P- O/P: 3000VAC/ 1 sec (10mA CUT-OFF) I/P - FG: 1500VAC/ 1 sec (10mA CUT-OFF)	A: I/P-O/P :0.881mA I/P-FG :1.531mA	P
18	BURN-IN TEST	I/P: 230VAC O/P:FULL LOAD TA:25.3°C BURN-IN DURATION : 1 hrs	B:NON BREAK	P
		1.LOW TEMPERATURE TEST I/P:80 VAC O/P:FULL LOAD AMBIENT TEMPERATURE:-9.0°C	AFTER 1.5 hrs POWER ON OK	
		2.HIGH AMBIENT TEMPERATURE FULL LOAD TEST		

19	ENVIRONMENT TEST (SAMPLE B:)	I/P:230VAC O/P:FULL LOAD AMBIENT TEMPERATURE:55.1 °C	AFTER 40 hrs NON BREAK	P
		3.ACCELERATED LIFE TEST I/P:265VAC O/P:FULL LOAD POWER ON :3 min POWER OFF :5 sec AMBIENT TEMPERATURE:85°C AMBIENT HUMIDITY:95%	AFTER 16 hrs NON BREAK	

NEXT PREVIOUS

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>TEST CONDITION / SPECIFICATION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>20</td><td>TEMPERATURE RISE TESTT rise OF PARTS</td><td>I/P :230VAC AFTER 1 hr BURN-IN
O/P :FULL LOAD TA:25.3°C
<table>
<tr><th>POSITION</th><th>P/N</th><th>TEMP</th><th>T rise</th></tr>
<tr><td>BD1</td><td>BRIDGE DIODE</td><td>54.3°C</td><td>29.0°C</td></tr>
<tr><td>U1</td><td>MAIN TRANSISTOR</td><td>51.2°C</td><td>25.9°C</td></tr>
<tr><td>T1</td><td>MAIN TRANSFORMER</td><td>62.6°C</td><td>37.3°C</td></tr>
<tr><td>D7</td><td>O/P DIODE</td><td>67.9°C</td><td>42.6°C</td></tr>
<tr><td>C17</td><td>O/P FILTER CAPACITOR</td><td>54.5°C</td><td>29.2°C</td></tr>
<tr><td>C5</td><td>I/P FILTER CAPACITOR</td><td>38.7°C</td><td>13.4°C</td></tr>
<tr><td>D5</td><td>CLAMP DIODE</td><td>53.2°C</td><td>27.9°C</td></tr>
</table></td><td></td><td>P</td></tr>
<tr><td>21</td><td>LIFE CYCLE</td><td>B: SUPPOSE C17 IS THE MOST CRITICAL COMPONENT
I/P:230VAC O/P:FULL LOAD Ta:25°C Tc17:54°C Life: 169368 hrs
I/P:230VAC O/P:FULL LOAD Ta:50°C Tc17:74°C Life: 42342 hrs</td><td></td><td>P</td></tr>
<tr><td>22</td><td>CRITICAL COMPONENT RECORD (FOR QC INSPECTION REFERENCE ONLY)</td><td>B: FUSE : 2.5A/250VAC CQ GTE
BRIDGE DIODE : LT KBP208G(GLASS)
LINE FILTER : TF-416 ET-20V
TRANSFOMER : SF TF-433 EI-28
POWER SWITCHER : PHIL TOP223Y
OUTPUT DIODE : C82-004 TO-220
OUTPUT CAPACITOR : N.C.C 2200uF/10V , 105°C, RJH
INPUT CAPACITOR : HITACHI 82uF/400V,85°C HP3
P.C.B : PS-25,CEM-1 2 OZ 61mm x 107mm</td><td></td><td></td></tr>
<tr><th>DATE</th><th>SAMPLE</th><th>TEST RESULT</th><th>TEST</th><th>APPROVAL</th></tr>
<tr><td>19980417</td><td>PS-25</td><td>PASS</td><td>H.C.LIOU</td><td>Max Lin</td></tr>
<tr><td>20010226</td><td>PS-25-3.3,7.5,13.5,27</td><td>PASS</td><td>SAM</td><td>Max Lin</td></tr>
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